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ABSTRACT

An Agency for International Development (AID) project established an educational film production unit in Malawi. The project was designed to deliver extension services and information from the Ministry of Agriculture to rural farmers and had to: 1) produce films which meet the needs of villagers; 2) keep costs to an absolute minimum; and 3) fully train a Malawian staff within two years. The project borrowed its major ideas from television news cinematography, shooting only color film with single system optical sound equipment. The basic production steps of preparing scripts, shooting and processing originals, editing, making release prints, and distributing copies were followed. Short single concept films were shot on location to educate and entertain villagers and to demonstrate improved agricultural methods. The project was successful, for costs were kept to less than $27 a minute (excluding labor), the films were shown to one-third of the country's population each year, and a Malawian staff took over the operation of the film unit after 18 months. (Author/PB)

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# A film unit designed especially for developing countries

by JOHN L. WOODS

"If only I had three times more properly trained extension field workers . . . ." Nearly every Extension Officer in developing countries surely has made that statement. Getting qualified extension workers into the field is a slow process. But, the need for more education in the village is NOW! One developing country, Malawi, is trying to bridge the rural extension gap with cine films produced by its own new film unit. Not a common film unit, but one designed especially for developing countries.

When Malawi, a young African nation, wanted to start producing educational films for rural people, it was realized that a new fresh approach was desperately needed. Malawi and other developing countries deserve something better than a third-generation carbon-copy of a costly educational film studio in a developed country.

Several factors had to be considered before an actual film unit could be set up. The entire operation had to fit the unique and critical needs of a developing country. The three most apparent needs were:

1. **The films produced must fit the educational needs of the village farmers.** The message must be easily understood by the ordinary farmer. Local farmers using local tools should be shown. The local language must be used. The production approach must be simple and close to "real life" for this relatively unsophisticated audience.
2. **Production costs must be kept at an absolute minimum.** Money resources in a developing country are extremely tight. Administrators must allocate budgets only where a high return on the investment is most promising. Several developing countries have reported that producing an educational film costs as much as building a rural hospital which is too costly when there are so many other pressing needs. High film production costs have discouraged many countries from starting their own film units.
3. **A Malawian staff must be trained within two years to fully operate the film unit.** The staff must be able to do all planning, shooting, editing and distributing of films. Malawi, like most developing countries, does not have trained motion picture people available. To start a film unit, developing countries must bring in outside technical advisors. These advisors are generally on contracts of around two years.

With the help of the United States Agency for International Development (U.S. AID) and the British Ministry of Overseas Development (ODM), Malawi started an agricultural educational film unit in March 1968. The Malawi film unit is attempting to meet the above critical needs for a developing country. The film unit is located in the Ministry of Agriculture's Extension Aids Section (Agricultural Communications Office).

A preliminary analysis clearly showed that Malawi, like other developing countries, desperately needs more extension field workers. The present extension workers are constantly torn between working with the higher level "progressive farmers" or with the mass "subsistence farmers". Malawi officials decided to concentrate the extension workers' efforts primarily towards the "progressive farmers" who require more specialized educational advice. And, cine films would take the role of stand-in extension workers for the mass "subsistence farmers" as well as assisting with educating "progressive farmers".

## Single Concept Filmlets Produced

The average villager in a developing country has not built up a tradition of what he expects to see in a motion picture. In many cases, a typical villager has not seen a motion picture before. Or, if he has, so few that an idea of film techniques common to us has not become part of his expectations. On the other hand, the average villager is used to seeing teachers, extension workers, politicians or other villagers talk, demonstrate or entertain.

The basic idea of the Malawi film unit is to reproduce something similar to these "real life" situations. Malawi's film unit is thus not producing films that resemble traditional motion pictures. The medium is 16 mm film, but that is where most similarities end.

A completed film is actually a series of segments. Each segment concentrates on one idea or one basic agricultural practice and no more. The individual segments are called "Single Concept Filmlets". Presently Malawi's film unit is producing the following types of single concept filmlets:

**Demonstration filmlets** are no more than a summarized version of a demonstration put on by an extension worker or another farmer. Some of the steps are shown close up so that everyone can easily see. Only the key points are emphasized so the audience is not confused by a lot of detail. An example of a demonstration filmlet is "How to Apply Fertiliser on Your Maize Correctly". The average length is three to five minutes.

**Testimony filmlets** are similar to commercials. A farmer gives a testimony about his successes with a

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recommended agricultural practice. The farmer is shown doing what he recommends. The length is generally 30 seconds to one minute.

**Successful farmer filmlets** are short interviews with good farmers. The farmers explain why, and sometimes how they do a recommended practice. The average length is generally two to three minutes.

**Educational-entertainment filmlets** show local musicians singing especially written educational songs (such as the "Fertiliser Song") or short puppet plays with simple educational messages. The primary purpose is to give the audience a short break during the film while still not distracting them from the overall message. The length is generally from one to two minutes.

The filmlets are produced separately and later put together to make a complete film. The audience and situation determine the combination of filmlets that go into the final film. For example, training centres and schools can join together all the filmlets for one crop and thus show the entire process. Or, they can use just one filmlet to show a single recommended agricultural practice.

The final films (15 to 20 minutes long) which the mobile units show in the villages, include filmlets that show all recommended practices for one agricultural enterprise during a specific time of the cropping season. One of these films usually includes three or four demonstration filmlets, one or two testimony filmlets, a successful farmer filmlet and an educational-entertainment filmlet. For example, an 18 minute film combination on maize planting is actually the following filmlets:

Testimony on correct maize planting — 1 minute.
Demonstration on how to plant correctly — 4 minutes.
Demonstration on how to weed correctly — 3½ minutes.
Successful farmer interview on weeding — 2½ minutes.
Entertainment song about fertiliser — 1½ minutes.
Demonstration on how to apply fertiliser — 4½ minutes.
Testimony on using fertiliser — 1 minute.

Malawi's film unit started producing single concept filmlets where the farmer's needs were greatest — with the four major crops. Before film production started, all recommended practices for each crop were listed. Then a list of filmlets for each practice was drawn up.

Besides producing just agricultural filmlets, Malawi's film unit is also working in health, nutrition and other subjects needed by the rural people.

In addition to the flexibility of single concept filmlets, there is one other important advantage. When recommendations for one agricultural practice change, an entire film does not become obsolete. That particular filmlet can be reshot at a very low cost as compared with reshooting an entire film.

### Single System Sound Method Selected

Besides determining the type of films to be produced, the particular problems for equipping a film unit in a developing country were carefully analysed.

The decision was made to build the Malawi film unit around the Auricon single system optical sound camera. The Auricon camera puts sound on the film at the same time as the picture is shot. As far as this author knows, Malawi is the first developing country to use single

*Cine Cameraman Tex Mbuka operating the Auricon Pro-600 "Special" single system sound camera. A second man (not shown) is operating the amplifier which feeds the sound to the camera. Mbuka started operating the camera on assignments four months after joining the film unit.*

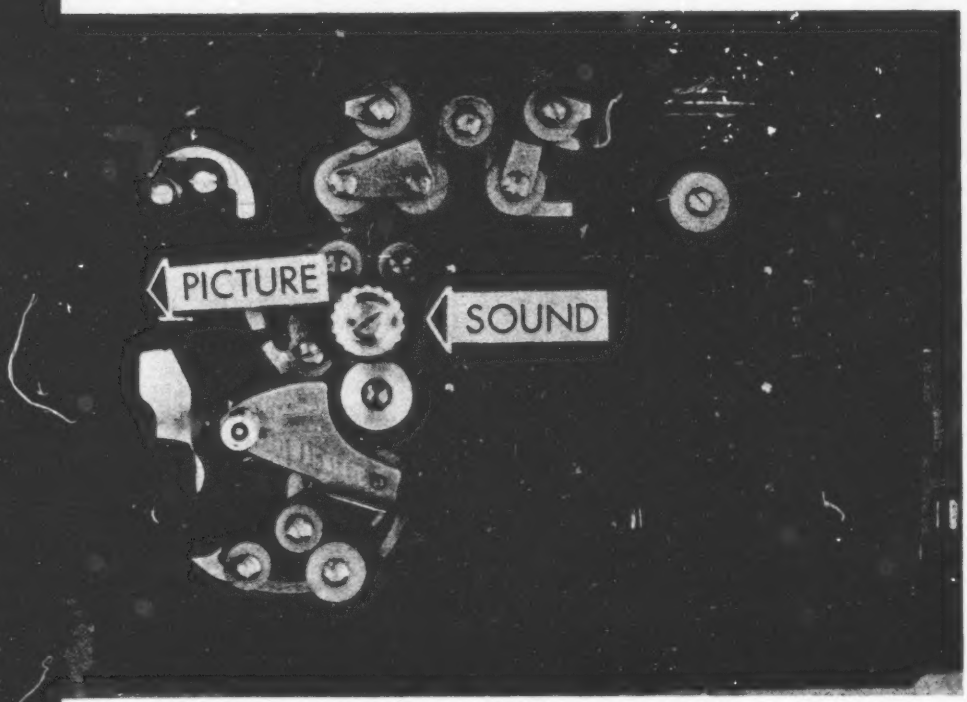
system sound equipment to produce educational films.

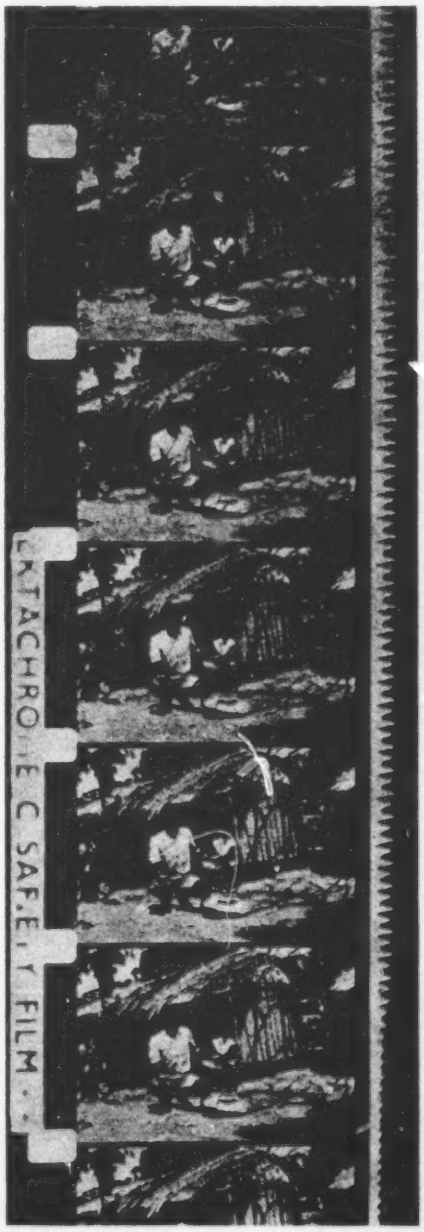
The single system sound method is much simpler than the traditional double system sound method which records the sound separately from the picture. Due to this simplified approach, the production costs and labour inputs are greatly reduced.

The Auricon equipment is relatively easy to operate. The equipment is extremely rugged. The camera is mainly used for television news work in developed countries where it must withstand heavy day-to-day use under almost any conditions. Reliability and maintenance free operation is an important requirement in a developing country.

The basic equipment costs approximately £4,167 (U.S. $10,000). This includes an Auricon Pro-600 "Special" camera with T-70-A variable area galvanometer, Auricon NR-25-A7 amplifier, Agenieux 12-120 mm zoom lens, tripod with fluid head, two sets of editing rewinds, two editing viewers, two optical-magnetic sound readers, two hot splicers, two optical-magnetic projectors, screen, six studio "quartz" lights, and a number of accessories and back-up spare parts. The magnetic sound attachment was not put on the camera in an effort to keep production procedures as simple as possible. This attachment can easily be added later with no modifications.

As the film runs through the camera, picture and sound are recorded simultaneously. The arrows show where each is recorded. The sound is recorded 26 frames ahead of the corresponding picture. This is the same position as required to play back on a standard 16 mm motion picture projector.




Once the film is processed the picture and sound track (on the right side) can be seen. This is a scene from a testimony filmlet on using fertiliser. The single system sound track is automatically in perfect synchronization with the speakers' lips ("lip-sync").

## Production Techniques Adapted from TV News

The number of production procedures used in Malawi's film unit are greatly reduced from the common filming method. Many procedures being used have been adapted from television news filming. The following steps seem to be very suitable for the type of filmlets being produced:

1. **Preparing the script.** The story is researched, scripted, edited, checked by an agricultural specialist, and translated into the local language. Approximately three-fourths of the total production time is spent in this step. With single system sound, the script must be in final form before shooting. Once the film is shot, no changes can be made in the commentary.

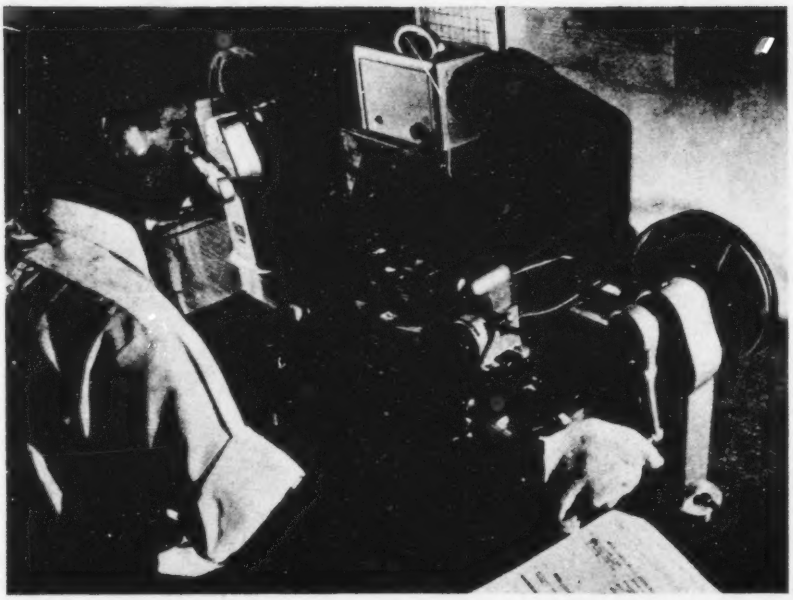
*Everisto Mwale, Head of Malawi's film unit, and two other staff members write the scripts. About three-fourths of the film production time is spent in the scripting stage. Each staff member was taught typing.*

*When on a filming assignment, the team includes a Producer-Director, Everisto Mwale; Cameraman, Tex Mbuka; Soundman, Edson Nyirenda; Assistant Cameraman, Lyford Nandolo; and Commentator, William Sabirika. Not shown is the driver who also handles the electrical power supply. Each scene is rehearsed several times before being shot.*

2. **Shooting the film.** A filmlet is shot on location (generally on a farm or in a demonstration garden) during a one day's shooting session. Each scene is rehearsed before shooting. The sound and picture are recorded simultaneously. A four minute demonstration filmlet takes about three hours to shoot.

3. **Processing the exposed film only.** The film is sent to a laboratory for processing. No work print (rush print) is made which saves a lot of money. The colour film recommended is 16 mm Kodak Ektachrome EF-B type 7242. (Ektachrome Commercial type 7255 can be used as explained in step 5 page 15).

4. **Editing the camera original.** The processed original (the film which was run through the camera) is edited by running it through a picture viewer and sound reader. The best "takes" are selected and spliced (joined) together. Editing a four minute film takes about three hours. The original film is never projected.



*Producer-Script Writer Edson Nyirenda edits a filmlet. A work-print (cutting print) is not made. The processed original film is edited by running it through a picture viewer and a sound reader. A record of the best "takes" is kept while shooting the film so that editing is easier.*

*Film Librarian William Sabirika picks out a release print for distribution. A careful record is kept of all films distributed. The Extension Aids Section publishes a film library catalogue every six months.*

5. **Making release prints.** The edited original is returned to the laboratory for making release prints (projection prints). If the original film is Ektachrome EF-B, the release prints should be made on Kodak Ektachrome R Print Film type 7388. If the original film is Ektachrome Commercial ECO, the release prints should be made on Kodak Ektachrome Reversal Print Film type 7386. (It should be noted that some laboratories outside the United States have ceased using print stock 7386. So be sure to check with the laboratory first before using ECO film).

   For the best single system optical sound quality, Kodak recommends that the sound track area (on the print) be treated with a sulphide developer during processing. Type 7387 print stock (commonly used for double system sound prints) gives a negative sound track on the print and, therefore, is not recommended for single system sound prints.

   In countries where several languages are spoken, the application of a "half-track" magnetic stripe on the print may be helpful. With this method, the optical sound would be in one language and the magnetic stripe would carry a second language on the same film. This procedure has not been needed in Malawi, hence the author is not sure how well it might work.

6. **Preparing films for distribution.** When the release prints return from the laboratory, they are labelled and put into the Extension Aids Film Library for distribution. Total elapsed time from shooting to distribution is generally less than four weeks. (Caution:

Sufficient extra prints should be made. Malawi's Extension Aids Section estimates that the average print life is around 30 showings when projected under village conditions).

Many motion picture producers feel that the single system method gives inferior sound quality as compared with the double system method. In fact, the quality is not as good. However, Malawi's film unit has found that the sound is good and more than adequate for the village audience.

Another complaint is the difficulty of editing because the sound is on the film 26 frames ahead of the corresponding picture. Television news film script writers have learned how to plan around this limitation. They have learned to take advantage of it in some cases. Malawi's script writers have adopted many of these television news scripting techniques.

Probably the most difficult idea to get across to film producers and especially administrators in developing countries is that the single system sound method is not best suited for producing the traditional type of feature film. Since the sound is put on at the time of filming, the scenes must be longer. Also, the entire film should be shot during one day's shooting because a commentator's voice will change from one day to the next. The number of locations on which the film is to be shot must be kept to a minimum.

The single concept filmlet approach is perfectly suited to the single system sound method. Unfortunately, administrators in developing countries are not familiar with the single concept filmlet. They normally request a longer feature type film which is a tour or survey of a complex subject. The double system sound method is best suited for producing this feature type film.

The author believes that the village people in many developing countries are not yet ready for the more complex films. The simple "real life" approach of the single concept filmlet should have a greater educational impact right now on this audience. Experience in Malawi with the single system method is confirming this belief.

As the audience becomes more sophisticated, then the filming techniques will have to be changed.

**Production Costs are Low**

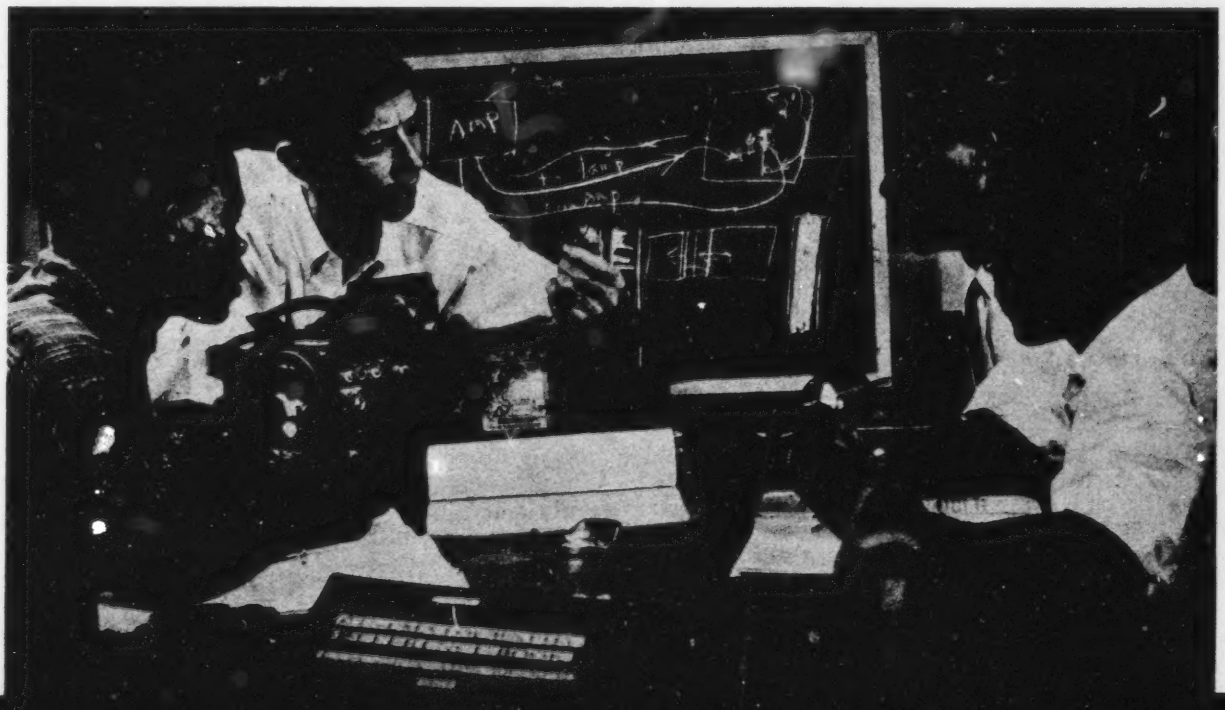
As explained earlier, single system sound requires fewer production steps and, therefore, is much lower in cost. Malawi's Extension Aids Section, using the single system sound method, spends £11 (U.S. $26.40) per minute of final film for running production costs. Film producers using the double system sound method usually figure minimum running production costs at around £50 (U.S. $120) per minute. This does not include equipment costs, labour or overhead. Also, the cost of release prints is not included in production costs.

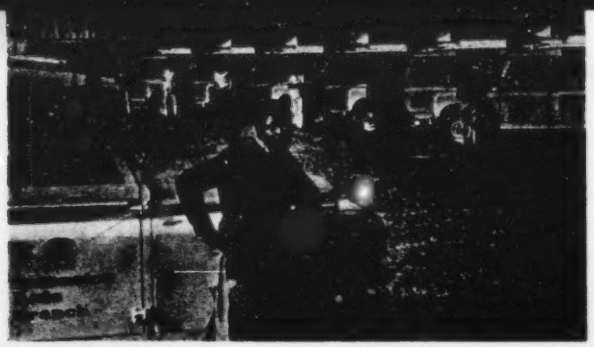
The single system sound production costs include 144 feet of 16 mm Ektachrome colour film (figuring a 4:1 shooting ratio), processing, answer print (trial print) and air freight to and from the laboratory. A work print (cutting copy) is not used.

Release prints cost another £1 15s. 0d. (U.S. $4.20) per minute. Malawi's film unit generally has 15 release prints made of each film. The total cost for producing a four minute colour sound filmlet with 15 release prints is around £149 (U.S. $357.60).

The cost for each filmlet is therefore extremely low. However, administrators in developing countries must realise that annual film costs involve a considerable amount of money because many filmlets can be produced.

*The author discussing the mechanics of how the single system sound works. Training combined informal classes with on-the-job experience. Several cinema staff members were taught how to do each job to provide a back-up in the event a staff member left the film unit in the future.*





*Foster Pemba, Higher Maintenance Assistant, is shown with the mobile units just before they go out on an educational campaign. Pemba is in charge of keeping all the electronics and projection equipment operating in the mobile units. Seven mobile units usually go out on educational campaigns.*

The annual cost for producing 110 filmlets (which would make approximately 20 complete 15-minute film combinations) with 15 release prints of each is around £11,175 (U.S. $26,820).

On the other hand, this annual cost can easily be justified by figuring the cost per person reached (dividing film costs by the number of people who see the films). In Malawi, the annual cost per person reached is 1.8d. (U.S. $0.018). And, the same films can be shown for several more years without any additional production costs. As compared with the cost of an extension worker's visit, this is extremely low.

**Staff training is on schedule**

The author arrived in Malawi on March 15, 1968 to establish the film unit and to train a Malawian staff. The equipment had arrived several weeks earlier.

As none of the Malawian staff had previous knowledge of photography, the basic principles of still photography had to be taught before cinema training could begin. Training combined formal classes with on-the-job experience.

On April 25, 1969 the Malawian staff went out on their first film assignment without this advisor. They could perform each job required in scripting, shooting, editing and distributing. By that time the staff had already been involved in producing 43 filmlets.

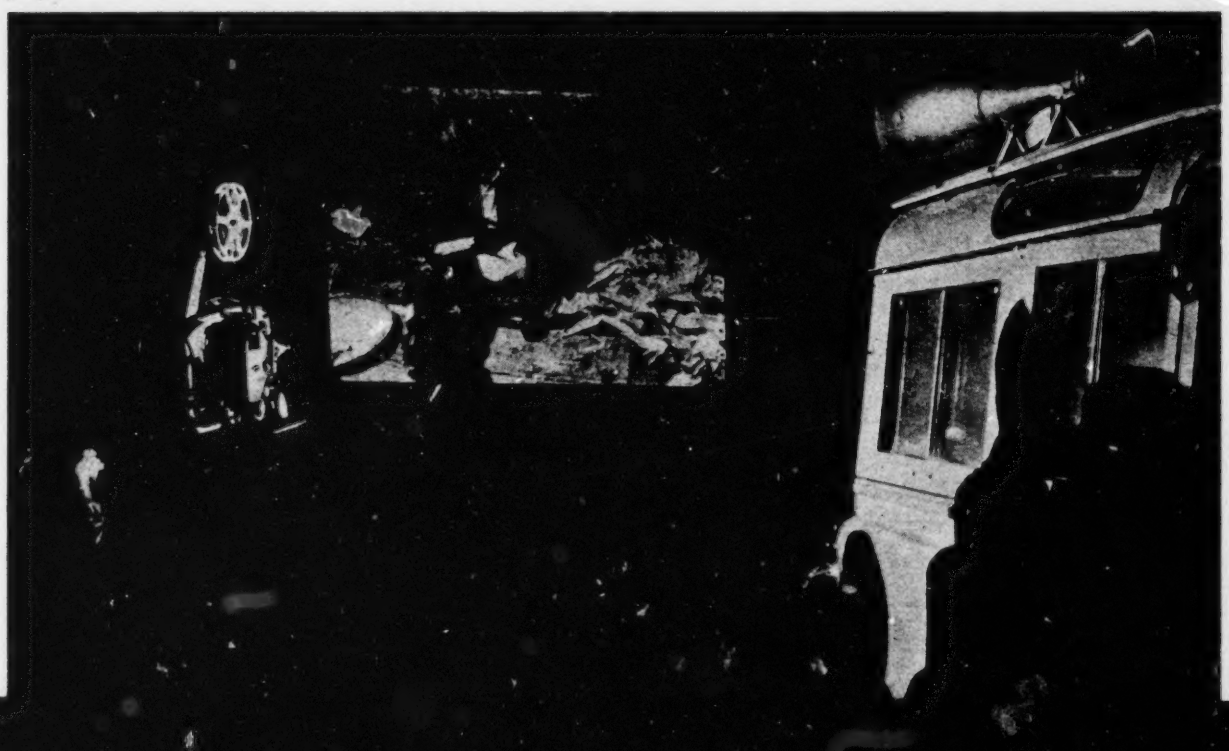
An important part of the training approach has been to encourage the staff to teach each other. When a new man joined the staff, the others were made responsible for his basic training. The staff must learn to teach others if the film unit is to grow in the future. The advisor is also writing a detailed reference book for the staff to assist in their future teaching efforts.

This advisor will remain in Malawi until March 15, 1970, thus completing two years. Each Malawian staff member (Cinema Co-ordinator, Producer-Script Writers, Cameraman, Assistant Cameraman, Sound man, Film Editor, Librarian, etc.) is receiving more specialized training in his own area during the remaining period.

**1.4 Million villagers see films**

Producing films is only half the job. The films must then be shown to farmers. Malawi's Extension Aids Section operates 13 fully equipped Landrover mobile units. Each mobile unit has a 16 mm projector, public address system, generator, 6 × 8 foot screen, tape deck and puppet stage. Seven mobile units are usually operating simultaneously on agricultural educational campaigns. The other mobile units are either involved

*Each mobile unit puts on a two and a half hour film showing at night in the villages. During the day the mobile units put on puppet shows in the area around the film showing site. Before the film showing, music is played to attract the people.*



in special campaigns, held for stand-by purposes, or in for maintenance.

Mobile unit campaigns are planned for a whole year. Campaign subjects and film showing locations are determined. An extension field worker from the area accompanies the mobile unit. During the day educational puppet shows are put on. At night a two and a half hour film showing is given.

Last year the mobile units showed films to 1.4 million village people. Some film showings had as many as 4,000 people in attendance. In many areas of Malawi, the mobile units are the only way to reach the people.

Films are also distributed to agricultural colleges, training centres, schools, youth groups, public health groups, special agricultural project areas, etc. The film unit publishes a film catalogue every six months.

**Constant evaluation conducted**

Mobile unit operators and extension field workers are required to keep detailed records on each film showing. These records give the size, composition, and reactions of the audience. Whenever possible, the cinema staff goes to village film showings and interviews farmers to find out their reaction. All this information is used to improve future films.

The Extension Aids Section, in co-operation with the Malawi Broadcasting Corporation Commercial Department, has started showing commercials during the village film shows. Sponsors naturally check the mobile unit film showings which indirectly acts as another evaluation of the program. After checking the village film programs, many sponsors have increased their commercial showings.

Presently, the seven campaign mobile units are showing a total of 99 commercials per night. During the last quarter (July, August and September) the nett revenue from the commercial programme was £2,745 (U.S. $6,588). There are two basic reasons for the commercial programme: (1) The revenue helps finance the film production programme; and (2) Hopefully a desire to spend money will be felt among the village farmers to help break the subsistence type of farming and also help develop local industry.

A side benefit to the commercial programme has developed in the added enthusiasm among all the people involved in the mobile unit operation. The staff realize that a mistake can mean a loss in commercial revenue.

**The future looks bright**

Malawi's unique film unit appears to be successful. The original criteria are being met:

1. All indications show that the single concept filmlet idea is meeting the educational needs of the village farmers.
2. The production costs are low.
3. A Malawian staff will completely operate the film unit within two years after starting the programme.

Present plans call for producing 110 filmlets a year. The author feels that within two years, the staff should be able to almost double this output.

In a few years Malawi will have television and the Extension Aids Section film unit will be ready. They already have many filmlets stockpiled ready to be shown on television. Also, the Aurican single system sound camera, which is designed for television work, can be used with no modifications.

In the future, the cinema staff will actually have a choice of two routes to follow. One is to move toward producing double system sound feature films and the other is toward educational television production. The author's opinion is that the staff will probably go toward the TV route if possible. The production training, experiences, and equipment which the staff has been exposed to are closer to television work than feature film production. In several years, a new generation of Malawians especially trained in double system sound techniques will probably become available to take over the feature film production.

Developing countries have gigantic educational needs and extremely small resources. The single system sound method of producing filmlets appears to be a logical way for a developing country to start meeting their educational needs by bridging the rural extension gap with cine films.